



Apprenticeship/Foundation Modern Apprenticeship
Framework

Framework for
Heating, Ventilating, Air
Conditioning and
Refrigeration

For England & Wales

Framework (version 5.08)

Framework Sector Code: 212

Implementation Date: 01 September 2008

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Apprenticeship/Foundation Modern Apprenticeship (A/FMA) for Heating, Ventilating, Air Conditioning and Refrigeration - Summary of the Mandatory Outcomes

Summary of Amendments

Framework Sector Code 212

1. Rationale for amendment

The accreditation by Emta Awards Ltd. (EAL) of

- 1.1 EAL Level 2 NVQ in Mechanical Engineering Services – Heating and Ventilating Installation (500/1332/4), expiry date 31/07/09

The addition of the above NVQ (1.1) in the framework enhances the choice providers, individuals and employers have in terms of identifying qualification delivery and assessment that is compatible to their development needs as organisations and individuals.

The content of the NVQs identified in 1.1 is the equivalent to that of NVQs currently identified in the framework.

- 1.2 The accreditation date for the NVQ Level 2 qualifications:
- MES Heating and Ventilating Installation (EAL – 500/1332/4)
 - MES Heating and Ventilating Installation (C&G – 100/3375/0)
 - MES Heating and Ventilating Maintenance of System Components (C&G – 100/3371/3)
 - MES Refrigeration and Air Conditioning (C&G – 100/3373/7)

and the technical certificates:

- C&G Level 2 Certificate in Heating and Ventilating Installation (100/3512/6)
- C&G Level 2 Certificate in Heating and Ventilating Maintenance (100/3513/8)
- C&G Level 2 Certificate in Refrigeration and Air Conditioning (100/3510/2)

will be extended to **31 December 2009**.

2. Amendment Details

- 2.1. The accreditation of the NVQ identified 1.1 above
 2.2 Identifying the amended framework as Version 5.08
 2.3 An implementation date for Version 5 of 01 September 2008

Apprenticeship/Foundation Modern Apprenticeship	Ref. Code	Level
NVQ Level 2 in the appropriate discipline as set out below:		
Mechanical Engineering Services Heating and Ventilating Installation (C&G) – within one of the following contexts: <ul style="list-style-type: none"> • Industrial and Commercial • Domestic • Ductwork 	100/3375/0	2
Heating and Ventilating Installation (EAL) – within one of the following contexts: <ul style="list-style-type: none"> • Industrial and Commercial • Domestic 	500/1332/4	2
Mechanical Engineering Services Heating and Ventilating <ul style="list-style-type: none"> • Maintenance of System Components 	100/3371/3	2

Mechanical Engineering Services Refrigeration and Air Conditioning <ul style="list-style-type: none"> • Small Commercial Refrigeration and Air Conditioning Systems 	100/3373/7	2
Mandatory KEY SKILLS and levels: <ul style="list-style-type: none"> • Communication • Application of Number • Information Technology 		2 2 1
Technical Certificates in the appropriate disciplines as set out below: Heating and Ventilating Installation City & Guilds Level 2 Certificate in Heating and Ventilating Installation	100/3512/6	2
Heating and Ventilating Maintenance City & Guilds Level 2 Certificate in Heating and Ventilating – Maintenance of System Components	100/3513/8	2
Refrigeration and Air Conditioning City and Guilds Level 2 Certificate in Small Commercial Refrigeration and Air Conditioning Systems	100/3510/2	2
<u>Additional Mandatory Requirement</u> Employment Rights and Responsibilities This covered during induction and in the training required to reach the standards of an NVQ. Appropriate aspects of ERR are contained within the Training Specifications and also within the Technical Certificate programmes developed from the Training Specifications. Formal assessment of Employment Rights and Responsibility is not specified.		

ADDITIONAL EMPLOYER REQUIREMENTS (OPTIONAL OUTCOMES)

Employers can select additional work related certificates for A/FMA's. These certificates will have relevance to the individual's job role. The selection will be made from the following list and recorded in the Training and Assessment Plan. Such certification is **NOT** a requirement for completion of the apprenticeship.

- First Aid - College Certificate
- Site Safety - College Certificate
- Fire Safety - College Certificate

1. Overview of the Apprenticeship/Foundation Modern Apprenticeship for Heating, Ventilating, Air Conditioning and Refrigeration

This section explains the reasons why this industry has developed A/FMAs. It will help employers and providers to:

- decide whether they wish to offer an Apprenticeship/Foundation Modern Apprenticeship (A/FMA)
- understand the implications of employed or non-employed status of apprentices
- understand the distinction between wages and allowances, including the implications of the National Minimum Wage
- identify the criteria for funding apprenticeship training from the local Learning and Skills Council (LSC)/Welsh Assembly Government(WAG)

Apprenticeship/Foundation Modern Apprenticeships for Heating, Ventilating, Air Conditioning and Refrigeration

Introduction

- 1.1 The heating, ventilating, air conditioning and refrigeration (HVACR) industry has a long and proud tradition of apprenticeships training. However, with the advent of NVQ/SVQs, the changing pattern of post-16 education, demographic trends and labour market analysis, the current Apprenticeship initiative provides a timely opportunity to review and update our training arrangements to give young people and new entrants ^[1] entering this industry the best preparation for the future.
- 1.2 A/FMAs must provide a convincing alternative career option for new entrants, employers and the UK as a whole. We agree with the Government's vision of a highly trained, skilled and flexible workforce. Employers, new entrants, training providers and others are working hard to deliver this goal.

[1] New entrants – an apprentice who is undertaking a learning and assessment programme in keeping with the requirement of this framework' with no experience in the Building Engineering Services sector.

Occupations/Job Roles

- 1.3 The following job roles will be covered in the framework:
- Heating and Ventilating Fitter
 - Heating and Ventilating Fitter/Welder
 - Domestic Heating Engineer
 - Ductwork Installer
 - Refrigeration Engineer
 - Service and Maintenance Engineer.
- 1.4 The disciplines covered by this framework are:
- Heating and Ventilating Installation
 - Heating and Ventilating Maintenance
 - Small Refrigeration and Air Conditioning System Installation
- 1.5 The Heating, Ventilating, Air Conditioning and Refrigeration Apprenticeship/Foundation Modern Apprenticeship framework is designed to meet:
- The industry's diverse training needs for Heating, Ventilating, Air Conditioning and Refrigeration Craft operatives

Industry Structure

- 1.6 The HVACR industry is a very diverse one and there are requirements for individuals with all levels of skills from NVQ Level 2 through to Level 5. The definition of the competence and the context in which it is performed at NVQ Level 2 meets the training and employment needs of some of the smaller employers in our sector, particularly in Domestic Heating and Small Commercial Refrigeration and Air Conditioning sectors. In recent years, there has been a significant growth in the number of small and medium sized companies in the sector.

The larger employers, although smaller in terms of the number of companies, actually employ around 84% of the workforce. They also require a proportion of their apprentices to operate at Level 2 following training.

- 1.7 A/FMAs provide an option for employers and new entrants^[1] that is flexible. The framework also meets the specific criteria laid down for A/FMAs, culminates in an NVQ Level 2, is standards based and not time served.
- 1.8 Businesses within the heating, ventilating, air conditioning and refrigeration sector provide a range of services to the construction industry and to a diverse range of industrial, commercial, retail and domestic clients. These services, although not fully inclusive, cover the following range of activities: heating and ventilating, air conditioning, refrigeration, heat recovery, energy management, gas installations, controls, hot and cold water, fire protection pipework, service and maintenance and facilities management. This latter component of the industry, encompassing engineering services, forms a growing part of the overall sector.

The number of employees within the HVACR sector is approximately 95,000.

Sector Skills Council

- 1.9 SummitSkills is the Sector Skills Council (SSC) for the Building Services Engineering Sector representing the that electrotechnical, electrical & electronic servicing, heating & ventilating, air conditioning, refrigeration and plumbing industries. The professions and trades covered in the sector are key to all other sectors in the UK and the individuals in these industries work for employers who demand a highly trained and skilled workforce.

Apprenticeship/Foundation Modern Apprenticeship in Heating, Ventilating, Air Conditioning and Refrigeration

- 1.10 To be attractive to employers and apprentices, the A/FMA framework should at the very least be perceived as equal in quality and status to the previous long established and recognised industry schemes. The model must also meet the industry's diverse training needs and the requirements for training, assessment and quality assurance laid down by the Awarding Body(ies). Centres delivering the industry's NVQs are responsible for arranging, maintaining, monitoring, evaluating and reviewing the assessment, verification and certification systems.
- 1.11 An NVQ Level 2 will be the final milestone achieved by A/FMAs.
- 1.12 All A/FMAs will sign a Training Agreement.
- 1.13 All A/FMAs will be issued with an Individual Learning Plan (Annex B).

The Target Group

- 1.14 A/FMAs provide work-based training and development for new entrants^[1] to the HVACR industry

[1] New entrants – an apprentice who is undertaking a learning and assessment programme in keeping with the requirement of this framework' with no experience in the Building Engineering Services sector.

Partners in the Programme

- 1.16 Employers play an active role by providing apprentices with opportunities to learn in their workplace, and many are supported by national and local providers who provide training and assessment services. The Small Business Service supports small employers. In Wales, Business Connect supports small to medium businesses. The LSC/WAG provides funding towards the apprentice's training programme, which is backed up by an Individual Learning Plan and each party signs a Training Agreement (refer to Annex C for a sample).
- 1.17 Funding and contracting for many national and multi-site employers is managed through the LSC's National Contracting Service. All references in this text to local LSC apply to the National Contracting Service.
- 1.18 All /FMAs will be employed, or on a work placement with an employer, from the commencement of training. The commencement date will be the date the Training Agreement was first signed.
- 1.19 All A/FMAs will be provided with the skills, knowledge and understanding to be able to do the job to the Occupational Standards required by the HVACR industry.
- 1.20 Any health and safety restrictions affecting persons under the age of 18 (e.g. working with certain items of tools and equipments) shall be applied

Wages and Allowances

- 1.21 The employer or provider pays the apprentice/trainee a wage if they are employing the apprentice/trainee, or an allowance if they have non-employed status. Non-employed apprentices/trainees are entitled to a minimum learning allowance per week set by the LSC/ WAG.
- 1.22 An employer should be aware of the National Minimum Wage (NMW) regulations that apply to their employees. If unsure, the employer should contact the NMW helpline on 0845 6000 678.

2. Initial Considerations and Planning

This section provides information about key aspects of A/FMAs that employers and providers will need to consider before recruiting an apprentice. It gives full details of the components of the apprenticeship, provides guidance on timescales for completion and outlines roles and responsibilities of partners, including quality assurance.

Mandatory Outcomes for the Apprenticeship/Foundation Modern Apprenticeship for Heating, Ventilating, Air Conditioning and Refrigeration

- 2.1 Occupational standards for Heating, Ventilating, Air Conditioning and Refrigeration have been developed by SummitSkills in line with current occupations in the HVACR sector, and through extensive Skills Foresight research. Research indicates that there is a need to recruit more A/FMA both now and in the future in the NVQ areas set out in 2.4 to sustain a viable workforce.
- 2.2 SummitSkills has set the A/FMA for Heating, Ventilating, Air Conditioning and Refrigeration at NVQ Level 2, in line with industry requirements for qualified individuals to operate at this level.
- 2.3 The A/FMA for Heating, Ventilating, Air Conditioning and Refrigeration is made up of the following components as described under NVQ, key skills and technical certificates.
- 2.4 **NVQ(s)**

Apprenticeship/Foundation Modern Apprenticeship	Ref. Code	Level
Mechanical Engineering Services Heating and Ventilating Installation (C&G) – within one of the following contexts: <ul style="list-style-type: none"> Industrial and Commercial Domestic Ductwork 	100/3375/0	2
Heating and Ventilating Installation (EAL) – within one of the following contexts: <ul style="list-style-type: none"> Industrial and Commercial Domestic 	500/1332/4	2
Mechanical Engineering Services Heating and Ventilating <ul style="list-style-type: none"> Maintenance of System Components 	100/3371/3	2
Mechanical Engineering Services Refrigeration and Air Conditioning <ul style="list-style-type: none"> Small Commercial Refrigeration and Air Conditioning Systems 	100/3373/7	2

- 2.5 These NVQs describe the competencies that employers require of Craft HVACR operatives.

Key Skills

- 2.6 Key skills are an essential requirement for apprentices to function effectively as members of a flexible, adaptable and competitive workforce.
- 2.7 Apprentices registering on the Heating, Ventilating, Air Conditioning and Refrigeration A/FMA scheme, must achieve the following mandatory key skills:

Communication	Level 2
Application of Number	Level 2
Information Technology	Level 1

A/FMAs should be encouraged to achieve the following key skills at the recommended levels. Opportunities to gather evidence towards key skills recognition will be available during the normal course of evidence gathering towards NVQ assessment.

Working with Others	Level 2
Problem Solving	Level 2
Improving own Learning and Performance	Level 2

A/FMAs should work towards the level of key skills they are capable of achieving and should regard the above levels as minimums.

- 2.8 Please note: Training Providers will still need to deliver training in these areas, specific to the course or discipline.
- 2.9 Skills Foresight research demonstrates that employers are placing great importance on a number of key skill areas, including literacy, numeracy, negotiation, verbal communication, customer service, flexibility and information technology.
- 2.10 Although opportunities to apply IT-related skills are limited in the Heating, Ventilating, Air Conditioning and Refrigeration occupations, in recognition of a need to increase the range of skills available to the industry and make its workforce more responsive to technological change/innovation, a suitable IT skill Level for Heating, Ventilating, Air Conditioning and Refrigeration A/FMAs is felt to be Level 1.
- 2.11 The Key Skills of Application of Number, Communication and Information Technology at the recommended levels are the minimum required to successfully complete the A/FMA in Heating Ventilating, Air Conditioning and Refrigeration, and must be separately certificated. Additional Key Skills may be achieved if sufficient evidence is generated during the apprenticeship. They are not mandatory for successful completion of the A/FMA.
- 2.12 The key skills need as far as possible to be integrated into the normal work role of the apprentice and be incorporated within occupational/vocational training. Evidence of Key Skills should be collected from the activities that candidates undertake to meet the requirements of NVQ elements and units and in accordance with the awarding body.

Delivery/Assessment/Certification

This applies to Key Skills and NVQs.

Key Skills

- 2.13 We require that all the centres delivering MES Heating, Ventilating, Air Conditioning and Refrigeration NVQs will also be approved to deliver Key Skills by one of the appropriate Awarding Bodies e.g. City and Guilds/AQA, EDEXCEL or RSA/OCR.
- 2.14 The delivery, evidence gathering and assessment of Communication, Application of Number and Information Technology should be integrated within the NVQ.
- 2.15 Delivery centres will separately assess and certificate each of the two mandatory key skills.

NVQs

An extract from the SummitSkills assessment strategy for Heating, Ventilating, Air Conditioning and Refrigeration NVQs is at Annex F.

Exemptions for Key Skills

- 2.16 A/FMA candidates who have achieved a good (A*-C) GCSE in English/Welsh, Maths or Information Technology need not be asked to attempt Levels 1 or 2 key skill qualifications in communication, application of number or information technology. This applies only to those apprentices starting on or after September 2001. Where GCSE A*-C English/Welsh, Maths or Information Technology are being claimed as a 'concession' against the whole level 1 or 2 key skills qualification, a maximum period of three years will be allowed between the award (i.e. date of certification) of the GCSE and the registration date of the A/FMA programme.

It is the responsibility of all A/FMA partners of the document to ensure they keep up to date with changes to exemptions. Exemptions apply equally to portfolio assessment or end tests.

Technical Certificates

- 2.17 Technical certificates focus on the knowledge and understanding which underpins the NVQ competencies and additional knowledge to facilitate progression to HE or higher levels of working. Technical certificates may also cover wider aspects of the occupation/sector as determined by SummitSkills. They are a structured approach to teaching and assessment, including external assessment, and are capable of being delivered through a taught programme of off-the-job learning.
- 2.18 SummitSkills technical certificates cover the basic practical skills which are taught and assessed off-the-job, they also include the delivery of Employer Rights and Responsibility (ERR) modules, which are a mandatory requirement for all A/FMAs.
- 2.19 There may be instances where an apprentice will be partially exempt from achievement of a technical certificate as part of their apprenticeship, for example, if they have already achieved an award that is one of the recognised qualifications that contributes towards the requirements for a technical certificate and has been agreed by the SummitSkills, or if the apprentice has achieved an award that is a level higher than that required by the framework. To avoid any difficulties at the point of claiming the A/FMA completion certificate, providers must gain written agreement to any exemptions during the initial development of the apprentice's Individual Learning plan from SummitSkills. Where an apprentice is exempt from the technical certificate, they may be encouraged to achieve an alternative acceptable qualification or one at a higher level that meets the requirement for a technical certificate.
- 2.20 As the certificates evolve, users will be able to update their framework documents with addendums posted on SummitSkills' website.
- 2.21 Information regarding the technical certificates at Level 2 in Heating, Ventilating, Air Conditioning and Refrigeration is at Annex A.

Additional Employer Requirements

First Aid – College Certificate
Site Safety – College Certificate
Fire Safety – College Certificate

These are additional requirements that are not eligible for A/FMA funding.

Employment Rights and Responsibilities

- 2.22 Employment Rights and Responsibilities are addressed in the Mechanical Engineering Services Core Unit, which forms part of the HVACR Level 2 technical certificates. This can be supplemented by appropriate information that will cover:
- The right and responsibilities of workers, including equal opportunities legislation
 - The organisation, disciplines and representative structures of the MES and related industries
 - The impact on the sector of public law and policies.

Timescales

- 2.23 A/FMAs are based on achievement and not time serving. The apprentice's Individual Learning Plan (see Section 3.14) will specify a duration which allows the apprentice a reasonable prospect of successful completion of the programme. Although the LSC has set national rates for funding for each framework based on standard length of stay and outcomes, this should not impose timeserving on apprenticeships. Refer to Section 3.24 for minimum periods of training.

Working in Partnership - Roles and Responsibilities

- 2.24 The responsibilities of the apprentice, employer, provider and other partners must be communicated and clearly understood by all parties. The role of the apprentice, employer, provider and the LSC/WAG are included in this section. Roles of other organisations are included in Annex D.

The Apprentice/Foundation Modern Apprentice

- 2.25 The apprentice agrees to:
- apply themselves to their training and assessment, by attending courses and other on- or off-the-job learning events
 - be prepared for assessment, and actively participating in the planning and reviewing of their programme
 - take responsibility for their own learning and development
 - behave in a considerate and responsible manner, with due regard to their own and others' equality of opportunity, and to the health and safety of others and themselves in their working and learning environment.

The Employer

- 2.26 The employer should provide the apprentice with a working environment and job role/activities, within which it is possible for them to achieve the apprenticeship.
- 2.27 Employers must be prepared to:
- actively promote the value of the apprenticeship within the organisation, and ensure that other staff are fully aware of the needs of the apprentice
 - take an active part in the recruitment of the apprentice
 - employ, or sponsor, and pay the apprentice in accordance with agreed terms and conditions,
 - ensure the apprentice is treated exactly equal with current employees
 - undertake legal and contractual responsibilities for the health and safety of the apprentice
 - ensure conformity with their equal opportunities policy
 - ensure that sufficient time and resources are made available for the apprentice to fulfil their training and assessment commitments
 - actively contribute to the regular review of the apprentice's progress
 - fulfil the role of provider where no external provider is used and all training is carried out in-house.

Providers

- 2.28 Providers have a key role to play in the successful implementation of the apprenticeship. Their performance will be monitored by a number of organisations including the LSC/WAG. They should:
- ensure that all staff involved in the delivery of the apprenticeship have access to copies of the full framework documents and any other supporting literature and understand the specific requirements of the apprenticeship
 - ensure that all aspects of the programme are delivered in compliance with the framework requirements, the quality and all contractual quality and financial requirements of the local LSC/WAG. This includes the qualifications and experience of those delivering training
 - ensure that particular attention is paid to the integration of all aspects of the programme (NVQ, key skills, technical certificates and additional requirements) to ensure a developmental and coherent experience for apprentices
 - initiate requests for the A/FMA Completion Certificates, ensuring that all evidence of completion is available for SummitSkills audit purposes. The provider is also responsible for paying the A/FMA Completion Certificate fee.

The SSC – SummitSkills

- 2.29 SummitSkills is responsible for:
- developing, maintaining, monitoring and reviewing the framework
 - ensuring that the framework meets employers' current and future needs through consultation with employers, providers LSC/WAG through it's A/FMA Focus/Steering Group(s)
 - maintaining quality through constant monitoring, in particular through the A/FMA Completion Certification process
 - providing support, information and advice to employers, providers and local LSCs/WAG to help assure the quality of the framework delivery
 - issuing a completion certificate once they are satisfied that the apprentice has achieved all the mandatory outcomes
 - publicity and promotion of frameworks to a large target audience:
 - offering advice
 - guidance
 - answering queries and providing assistance
 - promoting HVACR disciplines as careers
 - promoting equality of opportunity.

LSC/WAG

- 2.30 Local LSCs/WAG regional offices work in partnership with local employers, providers and the Connexions/Careers Service/Careers Wales to ensure that there are A/FMA programmes available to meet local, regional and national needs. They have an important part to play in promoting this apprenticeship locally, and in monitoring and assuring the quality. Local LSCs/WAG regional offices intending to deliver this framework are required to:
- ensure the quality of implementation of the framework
 - contribute funding towards the costs and delivery of the framework as appropriate, in line with national rates
 - help employers identify suitable providers and assessment services
 - promote A/FMAs in their locality
 - ensure that each apprentice has an Individual Learning plan, underwritten by a Training Agreement, which is agreed and signed by the apprentice, the employer and the provider
- 2.31 The National Contracting Service has been set up as part of the LSC to provide a one-stop shop for national and multi-site employers and their representatives in order to provide a single point of contact for LSC services (see Annex D). An equivalent function for Wales is provided by NTP Wales.

3. Putting it into Action

This section explains the key processes that employers and providers need to follow to ensure that apprentices are recruited fairly. It outlines the learning and other support apprentices need to complete their apprenticeship, safely and within the timescales set down in the apprentice's Individual Learning Plan.

Entry Requirements

3.1 Because of the need for MES Heating, Ventilating, Air Conditioning and Refrigeration A/FMAs to be able to achieve a Level 2 qualification, it is recommended that candidates who have attained four GCSEs at grade D or above in Maths, English/Welsh, Science and Craft Design and Technology will be best equipped to meet the minimum standard in the initial assessment test.

3.2 All apprentices will be required to complete a comprehensive application form. SummitSkills requires that candidates must undertake an appropriate initial assessment test to assess their ability to achieve an A/FMA. The HVACR industry has always required new entrants of appropriate ability and are able to offer a varied and rewarding career in a challenging environment. The ultimate responsibility for selection will rest with the individual employer. It is the employers' responsibility to ensure that prospective apprentice does not suffer from impaired colour vision. Training Providers should help with this during the selection process by requesting information about colour deficiency on the application form.

Other selection criteria may include:

- Motivation to succeed within the sector
- Willingness to learn and apply that learning in the workplace
- Enthusiasm and attitude to work
- Ability to demonstrate that they have the potential to complete the qualifications which are part of the Apprenticeship
- Willingness to communicate effectively with a range of people
- Being numerate and literate
- GNVQs in construction and the built environment
- National record of achievement/progress file

3.3 Whilst SummitSkills recommends the above selection criteria, it is for guidance only. No new entrant should be refused access to an initial assessment test on the basis of educational qualifications alone.

3.4 The terms and conditions of employment including pay and arrangements for linking pay and progression, are matters for agreement between the employer and the apprentice. It is expected that the conditions of employment applying to new entrants undertaking the Heating, Ventilating, Refrigeration and Air Conditioning A/FMA framework will be those normally applicable to the employer or sector concerned. For the guidance of employers only, the HVCA has prepared a checklist of terms and conditions that may be included in a Contract of Employment. This also contains a number of specific provisions in areas where it might be necessary to set out clear links between the training documentation and the Contract of Employment.

3.5 Some employers may not have trained apprentices before, or used a Training Agreement. so their normal terms and conditions might not include reference to the training aspects. The checklist is a list of headings that will remind them to include such things as:

- Reference to the Training Agreement (Annex C) and Individual Learning Plan (Annex B)
- Arrangements for attending college
- Reasons for termination of the Training Agreement
- Notice of termination of the Training Agreement
- Resolution of differences.

3.6 It will also list the headings that should be included in any Contract of Employment such as:

- Probationary period
- Pay
- Hours of work
- Normal place of employment
- Holidays
- Pensions
- Provision of tools
- Sick absence
- Disciplinary matters
- Gross misconduct
- Health and Safety.

The checklist is available from the Heating & Ventilating Contractors' Association (HVCA), Esca House, 34 Palace Court, London W2 4JG.

Recruitment and Selection

3.7 Apprentices may be recruited to the programme through a number of routes, for example:

- Referred to employers by local providers
- Referred by Connexions/Careers Service/Careers Wales or local Employment Service Agency
- Recruited directly by employers and providers through their normal recruitment and selection procedures
- Are already employed by the company (although would still be subject to the initial assessment test).

3.8 Employers/providers are responsible for the recruitment and selection of apprentices, based on clear equal opportunities policies and procedures (refer to section 3.31 – 3.40). Where employers do not have formal equal opportunities policies and procedures, local providers will be able to advise.

3.9 Employers/providers (national and local) will be expected to use a range of evidence to recruit apprentices, but typically this might include:

- C.V
- Initial assessment
- The national record of achievement (progress file), including exam results and personal achievements
- An interview
- References.

3.10 The recruitment process is also an opportunity for the new entrant to find out about the employing organisation and how he/she might fit in. Employers/providers will want, therefore, to provide clear information about the organisation's business, culture and structure and about the training and development opportunities it provides.

3.11 A/FMAs assessed as having additional learning needs (ALN) and/or additional social needs (ASN) but who, with the appropriate support, are capable of working towards an A/FMA, can attract additional funding from the local LSC/WAG regional office. It is not expected that new entrants following the Level 2 A/FMA framework route will have ALN/ASN and draw down additional funding as a consequence. If they do have these needs it is recommended that they follow a lower level route first, have their needs addressed and then progress to the Level 2 A/FMA route.

Training Agreement

- 3.12 The employer, apprentice and the local LSC/WAG regional office must sign a training agreement, normally within four weeks of starting the apprenticeship. This agreement lays down the commitment and responsibility of each party to the apprenticeship. A sample Training Agreement is provided in Annex C as an interim measure until the LSC/WAG has developed a national standardised Training Agreement. SummitSkills is happy for these agreements to be used, as long as they meet the requirements laid out in the Annex.

Initial Assessment

- 3.13 Young people will need to be assessed before entry to an A/FMA in order to ensure their suitability for the programme, the occupational sector and their potential to achieve the mandatory outcomes. The details of the assessment carried out must be in writing and must be kept. Initial assessment needs to be carried out by experienced personnel and the local LSC/WAG regional office or local providers should be able to advise on this.

Young people who are assessed as suitable for an A/FMA and are shown to need additional support will receive relevant extra help to enable them to progress towards completion of their apprenticeship. Wales has an extended assessment arrangement.

Individual Learning plan

- 3.14 All apprentices must have an Individual Learning plan (Annex B) which is agreed and signed by the employer, apprentice, provider and local LSC/WAG regional office. It:
- clearly identifies the person and includes their signature
 - sets out the start date and the intended duration of their learning
 - contains a brief statement of the apprentice's employment or career objectives
 - sets out planned attendance both on and off the job learning as required
 - includes the apprentice's prior learning and assessed needs and specifies a duration which allows the apprentice a reasonable prospect of successful completion of the framework
 - specifies by name, level and reference number NVQ qualification(s) which the apprentice aims to achieve
 - specifies all units which the NVQ and any other agreed qualifications, key skills, technical certificates and additional requirements which will be achieved during the apprenticeship, and the timescales in which these are likely to be achieved
 - sets out any agreed support arrangements, including review of progress
 - provides adequate information on how units of the whole NVQ and any other agreed elements of the training are learnt and assessed
 - ensures that apprentices will have unrestricted access to information on the arrangements
 - take into account best practice, drawing on good practice guides, inspection, evidence and other relevant sources.

Induction

- 3.15 A formal induction process is a mandatory requirement of Heating, Ventilating, Air Conditioning and Refrigeration A/FMAs. The company/organisation elements of induction are the responsibility of the employer. The employer or provider undertakes other elements.
- 3.16 Induction both on the job and off the job must take place. The Training Provider will usually take responsibility for ensuring induction has been carried out. Evidence must be available for inspection to confirm the induction has been carried out. Induction should be seen as a process, rather than a one-off event and employers and providers will need to select the most appropriate method and timescales for inclusion in the Individual Learning Plan.
- 3.17 The content of the induction programme will vary according to the employer's requirements. However, by the end of the induction programme, every apprentice must:
- understand and be trained in the organisation's health and safety policies and procedures (including fire, accident and emergency)
 - have an understanding and awareness of any confidentiality, safety and security issues related to the sector and be provided with and understand the correct use of personal protective clothing and equipment
 - have an awareness and understanding of equal opportunities and anti-discriminatory issues
 - understand their own and the organisation's responsibilities, including the procedure for making a complaint
 - have an overview of the organisation's business, the sector within which it operates, its structure, personnel and terms and conditions
 - be familiar with the physical working environment
 - be introduced to the key people who will be involved in their training, assessment and supervision
 - have an awareness and understanding of the organisation's policies, procedures and values
 - understand the purpose and requirements of apprenticeship, including NVQ training and assessment, technical certificates and key skills
 - understand and have agreed their Individual Learning plan and contract of employment which will be signed by the apprentice, employer, provider and local LSC/WAG regional office.
 - understand and have agreed and signed their Training Agreement.
- 3.18 Should the apprentice change employer or provider during the apprenticeship, the induction process should be repeated to ensure that all relevant information concerning the new organisation (or provider) has been provided. Where an apprentice moves around within a large organisation, is on a placement with another organisation, or is working with a provider as well as an employer, an induction to each setting will be required.
- 3.19 Knowledge gained during induction can be used as evidence for the Employment Rights and Responsibilities requirements of this framework.
- 3.20 All apprentices should be informed about the nature and scope of the industry and guidance on how the maximum benefit can be obtained from their apprenticeship and education and training programme, as part of the induction programme.

Mentoring

- 3.21 New Entrants often benefit from having someone to talk to during their training and this increases their chances of successfully completing the apprenticeship. Organisations gain because they are not only able to retain the apprentice, but may also find this a useful way of offering personal development to experienced members of staff, who would like to develop their listening, coaching and feedback skills. A member of staff who fills this role is generally called a 'mentor'. Having a mentor is optional, however, it is good practice for all apprentices to have access to a mentor.

On- and Off-The-Job Training

- 3.22 New entrants are entitled to receive appropriate learning away from the direct working environment and providers and employers should work together to manage this process.
- 3.23 The minimum time for off-the-job training will be determined by the appropriate HVACR technical certificate (see Annex A). Off-the-job training is defined as learning which takes place within the workplace, but away from the normal day to day work responsibilities, for example, using a computer or distance learning materials in a separate room or office away from the workplace at the premises of a learning centre or local college.

Minimum Periods of Training

- 3.24 The majority of A/FMAs will average between 24-36 months for the achievement of an NVQ Level 2 in this sector. However, these timescales are indicative only, as the pace of the apprentice's progress will depend on a number of internal and external factors.

Health and Safety

- 3.25 All partners (employer, apprentice, FE College/Centre, Training Provider involved in the implementation of apprenticeships must adhere to their statutory responsibilities for health and safety as follows:
- A safe working environment for apprentices must be provided whilst they are at work or in training
 - Appropriate training on health and safety in the workplace must be given to each apprentice
 - Awareness of, and compliance with, legislation relating to the Health and Safety at Work Act 1974 and the Working Time Regulations 1998 must be demonstrated
 - The apprentice must be aware of and comply with their statutory responsibility for health and safety at work. This relates to their own safety and to the safety of others in the work place. They must also be aware of, and comply with, any additional health and safety procedures laid down by their employer/provider
 - Local LSC/WAG are responsible for monitoring the compliance of providers to their statutory health and safety obligations and will carry this out through their Quality Assurance procedures.
 - Providers will monitor the compliance of employers with Health and Safety statutory requirements.
 - Electricity at Work Regulations
 - Young Persons at Work Regulations.
- 3.26 The induction training will include an awareness of the Health and Safety at Work Act. The objectives to be achieved are contained in the Basic Safety Foundation Module and are reproduced here:
- Describe the law with regard to health and safety at work
 - Explain their duties with regard to health and safety at work in respect of themselves and others
 - Identify and use correctly the appropriate protective clothing and equipment for any mechanical engineering service task
 - List the main conditions that lead to accidents occurring in the workplace
 - Undertake recognised courses of action in the event of a workplace injury to themselves or others
 - Inspect, erect and use access equipment
 - Health and hygiene
 - Electrical safety
 - Identify industrial gas cylinders
 - Lift, move and carry heavy or awkwardly shaped objects in complete safety without personal injury
 - Recognise the potential safety hazards associated with power and hand tools and the safe practices to adopt
 - Describe methods of fire prevention
 - Define problem areas resulting from untidiness and poor housekeeping
 - Safely use heating and cutting equipment utilised by the MES industries
 - State the correct procedures for locating and isolating services before commencement of cutting or drilling activities, where applicable
 - Describe the structural considerations necessary when cutting into floors, walls and ceilings
 - List general rules for the observance of safe practices
 - Safe working with lead.

LSCs/WAG Regional Offices, Delivery Centres and Providers

- 3.27 LSCs/WAG regional offices, Training Delivery Centres and Training Providers should explicitly state their legal obligations for health and safety. They will additionally need to provide details of their safety policy regarding supervision of apprentices, steps to be taken to monitor work placements, details of safety literature to be issued to apprentices and details of the necessary personal protective clothing and equipment that should be provided.

Employers

- 3.28 Employers are responsible for the health and safety of apprentices and need to have and implement a satisfactory health and safety policy including an established procedure for the management and monitoring of the policy. A copy of the policy should be given to each apprentice.

Risk Assessment

- 3.29 Employers, as part of their statutory responsibilities under the Management of the Health and Safety at Work Regulations 1999, are required to:
- Assess the risk to new entrants before they start work
 - Take account of their inexperience and lack of awareness of existing or potential risks and immaturity (refer to the Young Persons at Work Regulations)
 - Address specific factors in the risk assessment
 - Take account of the risk assessment in determining whether the young person should be prohibited from certain work activities, except where it is necessary for their training and where: – risks are reduced as far as reasonably practicable – proper supervision is provided by a competent person
 - Check their employers' liability insurance to ensure that no exclusions apply.

General

- 3.30 Health and safety training is an ongoing and integral part of the NVQ the apprentice will be undertaking.

Equal Opportunities

- 3.31 Whilst equal opportunities has been identified here under a separate heading, the principles relate to all those systems and procedures which have the potential to discriminate against apprentices at any point during the programme – from recruitment and selection and induction, through to successful completion.
- 3.32 There should be open recruitment of A/FMAs to the programme, which is available to all young people regardless of gender, ethnic origin, religion or disability who meet the stated selection criteria.
- 3.33 All partners involved in the delivery of the apprenticeship - local LSCs/WAG regional offices, providers, assessment centres and employers - must be committed to a policy of equal opportunities and must have a stated equal opportunities policy and procedure.
- 3.34 Employers/providers must be able to demonstrate that there are no overt or covert discriminatory practices in selection and employment. All promotional, selection and training activities must comply with the following relevant legislation:
- The Sex Discrimination Act, 1975 and Code of Practice
 - The Race Relations Act, 1976 and Code of Practice
 - The Disability Discrimination Act, 1995 and Code of Practice.
- 3.35 The apprentice's knowledge about equal opportunities policies and procedures can be used as evidence for the Employment Rights and Responsibilities component of this framework.
- 3.36 All parties to the A/FMA and providers (FE Colleges, Training Providers) must ensure genuine equality of opportunity for all apprentices and will not discriminate on the grounds of gender, race, religion or disability (where this does not affect the ability of the person to carry out their duties within the HVACR industry).

- 3.37 As the LSCs/WAG regional offices will be contracting directly with employers and training providers or through suppliers, they will have equal opportunities policy and monitoring procedures embedded in the contract.

Equal Opportunities Monitoring Procedures

- 3.38 Providers will monitor equality of opportunity practice and procedures within their own organisation and take positive action when necessary. It is also recommended that employers/providers conduct an exit interview if the apprentice leaves the programme before completion.
- 3.39 Local LSCs/WAG regional offices have overall responsibility to monitor practice to ensure that providers meet the criteria specified in their quality management systems. This includes monitoring the representation of apprentices in terms of gender, ethnicity and disability to ensure that it reflects, as far as possible, the levels of representation within the local community.
- 3.40 SummitSkills will retain overall responsibility for the development of the A/FMA and for monitoring equality of opportunity, primarily by the analysis of the LSC/WAG statistical returns. Where questions arise concerning policy and practice, SummitSkills will work closely with the local LSCs/WAG regional offices concerned to identify causes and to implement positive action where appropriate.

Monitoring and Reviews

- 3.41 The Individual Learning Plan and the progress of apprentices should be reviewed regularly, at a minimum every 12 weeks. The reviews should take place more frequently where lack of progress or other factors are causing concern. Any changes to the Individual Learning Plan must be agreed with the apprentice. Where additional help has been identified, the review will include the extent to which extra support is successfully addressing those needs.

Complaints Procedure for Apprentices

- 3.42 Occasionally an apprentice may wish to make a formal complaint or grievance during their training. All apprentices:
- have the right to complain
 - have the right to investigation of genuine complaints
 - must be informed of the complaints procedure by their provider
 - must be informed of the outcome of their complaints.
- 3.43 The LSC has issued guidance for local LSCs and NCS on handling complaints made against providers, local LSCs/NCS and the LSC National Office. As part of their Quality Assurance framework, WAG will be revising complaints procedures. Where an apprentice has a complaint against their employer regarding employment issues, this is a matter for the employer and employee where employment law provides appropriate remedies.
- 3.44 Providers must ensure that apprentices are fully informed of the complaints procedures and are given every support throughout the complaints process. The LSC/WAG will expect the apprentice to have exhausted the provider's complaints process before approaching them unless the provider is being unreasonable.

Early Leaving and Termination of Apprenticeship

- 3.45 The processes outlined in this framework have been designed to ensure that the right person is matched to the right occupation and at the right level. The monitoring, review and support mechanisms will reduce the chances of the apprentice leaving the programme before completing the full apprenticeship.
- 3.46 If the employer is not able to continue with the apprenticeship, either through redundancy or where the relationship between the apprentice and the employer has broken down, the employer's terms and conditions of employment will apply. The local LSC/WAG regional office and provider will apply all reasonable endeavours to help the apprentice find an alternative apprenticeship, including those apprentices who are not employed.

4. Achievement and Progression

This section provides brief details about the certification process for claiming national certificates and information about career progression and further training and qualifications relevant to the industry.

Achievement

- 4.1 The Key Operating Principles outline the national requirements for the award of A/FMA Completion Certificates.
- 4.2 The successful apprentice will receive a joint A/FMA Completion Certificate from SummitSkills. This is separate from, and in addition to, those certificates awarded for the achievement of the individual components of the framework, e.g., NVQ, key skills and technical certificates.
- 4.3 Providers are responsible for claiming the Completion Certificate from SummitSkills and for providing evidence of completion of the mandatory outcomes.

SummitSkills' requirements for claiming the certificate are:

On successful completion of the 3 milestones constituting the framework to include:

NVQ Level 2 in the appropriate discipline

Level 2 Technical Certificate in the appropriate discipline

Key Skills

- | | |
|--------------------------|---------|
| - Communication | Level 2 |
| - Application of Number | Level 2 |
| - Information Technology | Level 1 |

- 4.4 SummitSkills will provide a A/FMA Completion Certificate. Details of the NVQs achieved should be recorded in the Engineering Services SKILLcard scheme. Membership of the SKILLcard scheme is voluntary. It is free to A/FMAs for the duration of their apprenticeship. The apprentice will be issued with a security-sealed Registration Card bearing their name, signature, colour photograph, national insurance number and the qualifications they are aiming for. On completion of the apprenticeship, the apprentice **may** apply to have the Card updated to include the NVQ qualifications achieved. This will cost in the region of £10 for a three-year period.

Progression

- 4.5 The progression routes, professional recognition and job roles are contained in Annex E.

5. Framework Monitoring, Evaluation and Review

This section explains the role of SummitSkills in monitoring the achievement of this framework through the use of statistics provided by the LSC/WAG.

- 5.1 Providers submit regular information accordingly to LSC/WAG about the number of apprentices:
 - recruited by age, gender, ethnic origin, disability, programme
 - leaving the programme, including reasons for leaving
 - who have achieved the mandatory outcomes of the programme, and the number who have left the programme with the NVQ and/or part qualifications only.
- 5.2 SummitSkills is responsible for monitoring the take up and achievement of the apprenticeship. Monitoring information is provided on a regular basis via the LSC/WAG. Monitoring will inform the evaluation and review of frameworks.
- 5.3 Where the mandatory outcomes of a framework are changed as a result of a review, SummitSkills will specify the dates by which the new framework will start and the cut-off date for registration under the old framework. The decision to retain existing apprentices under the old framework, or transfer them onto the revised framework will be made in the best interests of the apprentice who, along with the other partners, will sign a new/revised Individual Learning Plan.
- 5.4 The Sector Code for this framework is **212**, which is also recorded on the Individual Learner record. It is crucial to the accuracy of the monitoring statistics that this code is correct.

6. Other Information

This section provides information about other learning and support materials relevant to the building services engineering industry together with useful contacts and reference numbers for the NVQs contained within this framework.

6.1 Useful Publications and Support Materials

All apprentices should receive appropriate health and safety documentation which is available from a wide variety of sources. The following list is for guidance:

Health and Safety in Building and Construction COSHH Regulations Safe Manual Handling What You Should Know About Personal Protective Equipment Electrical Safety at Work Be Safe -A Guide to Health and Safety in Training (available from the Department for Education and Skills)
These publications are available from Scriptographic Publications Ltd, FREEPOST (G1/2094), Channing House, Butts Road, Alton, Hampshire, GU34 1BR. Tel: 01420 541 738
www.scriptographic.co.uk

Further useful publications and support materials include:

- Workplace Development: Mentoring for Work-Based Training; DfES Ref No.GPS/WD2/1/99
- Modern Apprenticeships Equal Opportunities Checklist (CRE)
- Modern Apprenticeships: Guide for small businesses (free)
- Recruitment and Selection of Modern Apprentices (DfES)
- Information/Best Practice about Key Skills – Learning for Work

6.2 Useful Contacts

Commission for Racial Equality Elliott House, 10–12 Allington Street, LONDON SW1E 5EH Tel: 0207 828 7022 www.cre.gov.uk	Learning and Skills Council 101 Lockhurst Lane, Foleshill, COVENTRY CV6 5SF Tel: 0247 670 3241 www.lsc.gov.uk
Connexions www.connexions.gov.uk	National Contracting Service Tel: 0114 259 3097
DfES General www.dfes.gov.uk Lifelong learning www.lifelonglearning.co.uk Publications Prolog, Prolog House, Milner Road, SUDBURY CO10 Tel: 0845 602 2260	QCA 83 Piccadilly, LONDON W1J 8QA Tel: 020 7509 5555 www.qca.org.uk
Equal Opportunities Commission Arndale House, Arndale Centre MANCHESTER M4 3EQ Tel: 0161 833 9244 www.eoc.org.uk	Small Business Service www.smallbusinessadvice.org.uk
Health & Safety Books PO Box 1999, SUDBURY CO10 6FS	HVCA Esca House, 34 Palace Court, London W2 4JG Tel: 020 7313 4900 www.hvca.org.uk
City & Guilds 1 Giltspur Street, LONDON EC1A 9DD Tel: 0207 294 2468 www.city-and-guilds.co.uk	ACRIB Kelvin House, 76 Mill Lane, Carshalton, Surrey SM5 2JR Tel: 0208 647 7033 www.acrib.org.uk

<p>AMICUS-AEEU Hayes Court, West Common Road, Hayes, BROMLEY BR2 7AU Tel: 020 8462 7755 Fax: 020 8315 8234 www.aeeu.org.uk</p>	<p>BEST 3 Mill Court, 51 Mill Street, SLOUGH SI2 5DA Tel: 0800 917 8419 Email: info@best-ltd.co.uk www.best-ltd.co.uk</p>
<p>SummitSkills Vega House, Opal Drive, Fox Milne, Milton Keynes MK15 0DF Tel: 01908 303960 Email: enquiries@summitskills.org.uk www.summitskills.org.uk</p>	<p>Emta Awards Limited (EAL) National Verification Centre 3365 Century Way Thorpe Park Leeds LS15 8ZB Tel: +44 (0)113 260 1188 Email: nvc@eal.org.uk</p>
<p>Commission for Racial Equality Wales 14th floor, Capital Tower, Greyfriars Road CARDIFF CF1 3AG Tel: 029 2038 8977 www.cre.gov.uk/wales/index.html</p>	<p>National Training Partnership 4 Furnival Road, The Quayside, SHEFFIELD S4 7YA Tel: 0114 290 0553 www.ntp.co.uk</p>
<p>NTP WALES/CYMRU PO BOX 3028, CARDIFF CF3 0XQ Mike Howells Tel: 02920 770099 Email: mhowells@ntp.co.uk</p>	<p>JTL Head Office, Stafford House, 120/122 High Street, ORPINGTON BR6 0JS Tel: 01689 884100 www.jtlimited.co.uk</p>
<p>Careers Wales www.careerswales.com Careers Service Association – Wales Ltd Tel: 01443 409 422 North West Tel: 01286 679 199 Cardiff and Vale Tel: 029 2090 6700 Mid Glamorgan Tel: 01443 842 207 Powys Tel: 01597 828 988 North East Tel: 01352 750456 West Wales Tel: 01792 352 000 Gwent Tel: 01495 756 666</p>	<p>National Council of ELWa Tel: 08456 088 066 www.elwa.org.uk National Council for Higher Education Tel: 029 2076 1861 ELWa Mid Wales Tel: 01686 622 494 ELWa South West Wales Tel: 01792 354 000 ELWa South East Wales Tel: 01443 663 663 ELWa North Wales Tel: 01745 538 501</p>
<p>Welsh Assembly Government Tel: 029 2082 5111 Training, Skills and Careers Policy Division www.wales.gov.uk</p>	<p>Equal Opportunities Commission Windsor House, Windsor Lane, CARDIFF CF10 3GE Email: wales@eoc.org.uk Tel: 029 2034 3552 www.eov.org.uk</p>
<p>ACCAC Castle Buildings, Womanby Street, CARDIFF CF10 9SX Tel: 029 2037 5400 www.accac.org.uk</p>	<p>Business Connect Wales Tel: 08457 96 97 98 www.businessconnect.org.uk</p>
<p>ALI Adult Learning Inspectorate Spring Place, Coventry Business Park, Herald Avenue, COVENTRY CV5 6UD Tel: 0870 240 7744 Fax: 0870 242 1444 www.ali.gov.uk</p>	<p>Estyn Anchor Court, Keen Road, CARDIFF CF24 5JW Tel: 029 2044 6446 www.wales.gov.uk/subieducationtraining/content/tecs/about-e.html</p>

7. Fact Sheet

Apprenticeship/Foundation Modern Apprenticeship in Heating, Ventilating and Air Conditioning

What's involved?

An apprentice can expect to be doing work based learning with an employer and to be paid, either a wage if they are employed, or an allowance. The apprenticeship will include a National Vocational Qualification, Key Skills and a 'knowledge based element or technical certificate as listed below.

Competence Based Element	Knowledge Based Element	Key Skills
City and Guilds Level 2 NVQ in: <ul style="list-style-type: none"> • Heating and Ventilating Installation • Heating and Ventilating Maintenance • Refrigeration and Air Conditioning EAL Level 2 in NVQ: <ul style="list-style-type: none"> • Heating and Ventilating Installation 	Level 2 City and Guilds Technical Certificate in: <ul style="list-style-type: none"> • Heating and Ventilating Installation • Heating and Ventilating Maintenance • Refrigeration and Air Conditioning 	Key Skills at Level 2 in: <ul style="list-style-type: none"> • Communication • Application of Number Key Skills at Level 1 in: <ul style="list-style-type: none"> • Information Technology

The decision on which competence based and knowledge elements will be studied will be made by the employer and/or training provider in discussion with the apprentice.

Entry requirements:

Because of the need for MES Heating, Ventilating, Air Conditioning and Refrigeration A/FMAs to be able to achieve a Level 2 qualification, it is recommended that candidates who have attained four GCSEs at grade D or above in Maths, English/Welsh, Science and Craft Design and Technology will be best equipped to meet the minimum standard in the initial assessment test.

Whilst SummitSkills recommends the above selection criteria, it is for guidance only. No new entrant should be refused access to an initial assessment test on the basis of educational qualifications alone.

Minimum Periods of Training:

24-36 months depending on apprentice ability

What type of job might an apprentice be doing?

Working in a fabrication area or on site assisting a qualified trades person. Working towards a craft NVQ in either Heating and Ventilation Installation, Heating and Ventilating Maintenance or Refrigeration and Air Conditioning.

How long does the apprenticeship take to complete?

24-36 months depending on apprentice ability

Career progression after completing this apprenticeship

The natural progression route after completing the A/FMA programme is to seek the opportunity to undertake the A/MA programme - working towards the advanced craft level in one of the HVACR disciplines at level 3

Framework developed by:

SummitSkills
Vega House
Opal Drive
Fox Milne
Milton Keynes
MK15 0DF

Tel: 01908 303960
Email: enquiries@summitskills.org.uk
Web: www.summitskills.org.uk

Annex A

Apprenticeship/FMA in

HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION

(Please complete the tables below and include with your submission to the SfB AAG. The qualifications to be listed are those that are a mandatory requirement. You do not need to fill in the shaded boxes.)

Framework Code Framework Issue Number

2	1	2	Version 5.08
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Implementation date 01 September 2008

Name of SSC/SSB SummitSkills

Competence Based Element

Title	Level	Qualification Reference Number	Awarding Body	<i>Occupational Sector (to be completed by LSC National Office)</i>	Funding Rate 16-18 (to be completed by LSC National Office)	Funding Rate 19+ (to be completed by LSC National Office)
Mechanical Engineering Services – Heating and Ventilating Installation <ul style="list-style-type: none"> • Industrial and Commercial • Domestic • Ductwork 	2	100/3375/0	C&G			
Mechanical Engineering Services – Heating and Ventilating Installation <ul style="list-style-type: none"> • Industrial and Commercial • Domestic 	2	500/1332/4	EAL			
Mechanical Engineering Services – Heating and Ventilating <ul style="list-style-type: none"> • Maintenance of System Components 	2	100/3371/3	C&G			
Mechanical Engineering Services – Refrigeration and Air Conditioning <ul style="list-style-type: none"> • Small Commercial Refrigeration and Air Conditioning Systems 	2	100/3373/7	C&G			

Knowledge Based Element

Title of knowledge based qualification	Level	Qualification Reference Number	Awarding Body	Number of Guided Learning Hours (GLH)*	Funding Rate 16-18 (to be completed by LSC National Office)	Funding Rate 19+ (to be completed by LSC National Office)
City and Guilds Level 2 Certificate in Heating and Ventilating Installation	2	100/3512/6	C&G	540		
City and Guilds Level 2 Certificate in Heating and Ventilating – Maintenance of System Components	2	100/3513/8	C&G	580		
City and Guilds Level 2 Certificate in Small Commercial Refrigeration and Air Conditioning Systems	2	100/3510/2	C&G	400		

* NB. These must be the recommended GLH detailed by the Awarding Body. Incorrect GLH information will lead to incorrect funding of providers.

Key Skills

Title of Key Skill	Level	Funding Rate 16-18 (to be completed by LSC National Office)	Funding Rate 19+ (to be completed by LSC National Office)
Application of Number	2		
Communication	2		
Information Technology	1		

Annex B

INDIVIDUAL LEARNING PLAN

This Individual Learning Plan outlines a programme of training agreed between Training Provider and/or the Company and the Apprentice, which will be carried out under Apprenticeship/Foundation Modern Apprenticeship arrangements. The apprentice shall have unrestricted access to information on the arrangements. The Apprentice is employed by the Company named in Section 2. It is underwritten by the Training Agreement and sets out what the Apprentice is aiming to achieve during his/her apprenticeship. It will also be used to review progress.

Amendments made to this Plan will be agreed and countersigned by the learner as and when necessary or at review, where the ILP Amendments box on the review form will be completed and the original retained by the Training Provider as an addendum to this document.

Section 1 - Apprentice Details

Full Name		Mr/Mrs/Ms
Address		
		Postcode
Home Tel No		
Date of Birth	Age	Sex
National Insurance No	Guarantee Group	Main / Extended / Non
Career Aim & Employment Objectives		
Do you have a copy of your terms and Conditions of Employment?		Yes <input type="checkbox"/> No <input type="checkbox"/>

Section 2 - Company Details

Name of Company	
Address	
	Postcode
Tel No	Fax No
Contact	Ext No

Section 3 - Training Provider Details

Section 4 - Training Period

Title of Apprenticeship	Learning start date
Training Expected End Date	Actual leaving date
Duration of Training years	months
	Framework Approval Date

This apprenticeship is funded by: _____

Section 5 – Learning Achievements/Qualifications

Academic qualifications in full time education at school/college One to four GCSEs (Grade A to C) More than four GCSEs (Grade A to C) One to four GCSEs (Grade D to G) More than four GCSEs (Grade D to G) One 'A' Level Two 'A' Levels (or more) No information			
G/NVQ Qualifications	Level	Award Body	Date Achieved
Other qualifications	Level	Award Body	Date Achieved
Initial Assessment Procedures: Successful completion of the MES A/FMA Pre-apprenticeship Initial Assessment Test, Employer interview, Training Advisers interview (e.g. Psychometric testing)			
Not ALN/ASN endorsed			

Section 6 – Accreditation of Prior Learning Section 8a - NVQ(s) To Be Achieved (Awarding Body = CGLI or EAL)

NVQ units of competence/core skills units for which the Apprentice intends to submit evidence of prior achievement			
Unit Ref No	Unit	Title	Level

NVQ Title Level QCA Ref No. NCVQ Last Entry Date _____		NVQ2 anticipated Achievement date: NVQ2 anticipated Achievement date:	
Unit Ref No.	Unit Title	Anticipated Achievement Date	Actual Achievement Date

***DELETE AS APPROPRIATE**

Optional Units	Title	Anticipated Achievement Date	Actual Achievement Date

NVQ Title Level QCA Ref No. NCVQ Last Entry Date		NVQ3 anticipated Achievement date: NVQ3 anticipated Achievement date:	
Unit Ref No.	Unit Title	Anticipated Achievement Date	Actual Achievement Date

***DELETE AS APPROPRIATE**

Optional Units	Title	Anticipated Achievement Date	Actual Achievement Date

Section 8b – Technical Certificates

Module Ref No.	Module Title	Anticipated Achievement Date	Actual Achievement Date

Section 8c – Other assessed training needs

Section 9 – NVQ Registration

The candidate is registered by the FE College/Centre which they attend.

Date of registration (if known) Candidate Registration No. (if known)

Section 10 - Key Skills To Be Achieved (C&G)

<i>Key Skill Title</i>	Level	Anticipated Achievement Date	End Test Exemption	Delivery/Assessment Method

Section 11 - Additional Training/Achievements

Section 12 - Review Arrangements

This Learning Plan will be reviewed quarterly from the start of training.

Section 13 – Attendance Requirements

Section 13a – On the job

Section 13b – Off the job

Name of Organisation	Person Responsible	Component of Framework	On-the-Job	Off-the-job
				<input type="checkbox"/>
				<input type="checkbox"/>
			<input type="checkbox"/>	
			<input type="checkbox"/>	

Learners undergo various patterns of training, dependant upon where they are based. All accommodate delivery of the Industry's approved NVQs. This learner is undertaking the following route:
1a. Off the job block release training
2. College/Centre to be attended (where Applicable)

Section 14 - Assessment

Qualification	Assessor	Assessment location	Assessment methods

In accordance with the appropriate site risk assessment which is the employer's responsibility under statute, the provision of personal protective/safety equipment required by the statute is the responsibility of the employer. This will be provided at no cost to the apprentice.

Section 16 - Signatures/Start Declaration

Name of Apprentice	
I confirm that I have been assessed, that I have read, understood and am satisfied with my Individual Learning Plan and my training began on the date shown in Section 4.	
Signed	Date

Name of Training Provider Representative	
I confirm that this Individual Learning Plan is acceptable, that it will be supported by the Training Provider and that the Apprentice's training began on the date shown in Section 4.	
Signed	Date

Name of Employer	
I confirm that this Individual Learning Plan is acceptable, that it will be supported by "the employer" and that the Apprentice's training began on the date shown in Section 4.	
Signed	Date

Section 17 - Confirmation of Data Protection Act. 1998 access to qualifications notice

I understand that processing of my personal details will take place in accordance with the Data Protection Act and is required for the delivery of my Advanced Modern Apprenticeship.

I hereby authorise the Training Provider to request on my behalf from Qualifications Awarding Bodies (for example, City & Guilds) details of all qualifications achieved whilst I am working towards the completion of my Advanced Modern Apprenticeship. I acknowledge that this data will be held in accordance with the Data Protection Act.

Annex C

Sample Training Agreement

This Agreement between:

Employer _____ of

_____ and Apprentice

_____ and Parent/Guardian

(if aged under 18)

and Learning and Skills Council _____
is made _____ on date _____

1. The Employer's Responsibilities

- 1.1 To employ, or sponsor, and pay the Apprentice in accordance with agreed terms and conditions.
- 1.2 To agree jointly with the local Learning and Skills Council and Apprentice, an Apprenticeship Plan ensuring that satisfactory progress is maintained. Any changes to the plan to be agreed at review stages.
- 1.3 To provide, as far as is reasonably practical, the experience, facilities and training necessary to achieve the training objectives specified in the Apprenticeship Plan without loss of wages and to treat the Apprentice fairly and reasonably as an employee would be treated.
- 1.4 If the Apprenticeship is terminated due to redundancy, to attempt, with the assistance of relevant organisations, to arrange employment for the Apprentice, for the duration of the Apprenticeship, with another company.
- 1.5 To undertake legal and contractual responsibilities for the Health and Safety of the Apprentice.
- 1.6 To ensure conformity with the employer's equal opportunities policy

2. The Apprentice's Responsibility

- 2.1 To work for the Employer to the best of her or his ability and in accordance with the Employer's policies and procedures.
- 2.2 To observe the Employer's terms and conditions of employment.
- 2.3 In both working and training, to be diligent and punctual and to attend courses, keep records, take part in an contribute to the review process, undertake assessments in order to achieve Apprenticeship Plan objectives and keep the employer informed of progress towards those objectives.
- 2.4 At all times to behave in a safe and responsible manner and in accordance with the requirements of Health and Safety legislation relating to the individual's responsibilities and to promote and act in the Employer's best interests.

3. The Local Learning and Skills Council

- 3.1 To check that the contents of the Apprenticeship Plan fulfil the nationally and industry/sector agreed criteria for the Modern Apprenticeship.
- 3.2 To ensure that the training meets the LSC Quality Assurance process including Health and Safety obligations required of local LSCs and their suppliers.
- 3.3 If the Employer is unable to complete the Apprenticeship, then the local LSC shall use its best endeavours to ensure that the Apprentice is offered the opportunity to transfer to another organisation who will be able to provide a Apprenticeship Plan substantially similar to the existing Apprenticeship Plan.
- 3.4 For making payments to the Employer and/or Provider as set out in the current applicable LSC/Employer/Provider Agreement.

I understand the responsibilities as defined above and agree to this undertaking.

Signed _____ for Employer

Date _____

Signed _____ Apprentice

Date _____

Signed _____ Parent/Guardian (if aged under 18)

Date _____

Signed _____ local LSC representative

Date _____

Copies to:

Apprentice
Employer
Provider
Local LSC

Annex D

Partners Involved in Apprenticeship/Foundation Modern Apprenticeships

Awarding Bodies

Awarding Bodies are responsible for quality assuring the individual qualifications that make up this apprenticeship. They do this by monitoring the assessment process and awarding the NVQs, key skills, technical certificates and unit certificates. Awarding Bodies are not responsible for the overall quality of the FMA programmes.

Adult Learning Inspectorate

The Adult Learning Inspectorate is responsible for inspecting all government-funded work based training in England. It inspects those holding contracts for government-funded training to ensure that national quality standards are being met, to interview apprentices and to offer advice and support where standards are felt to be deficient. Reports are made public on the Internet. Estyn is the Welsh equivalent.

Connexions/Careers Service

Connexions is a careers advice and youth support service which replaces local Careers Services. It integrates careers, health, youth and other services for 13 – 19 year olds and helps to prepare young people for the transition to work and adult life. Young people will have access to a Personal Adviser who will:

- provide advice and guidance on career options, including FMAs
- identify the potential of young people and refer them to employers and providers for vacancies and programmes
- encourage young people to stay in education or training so that they can reach their full potential
- provide a Connexions Card for each young person which will provide rewards for learning such as discounts on travel and learning materials and other services, including a dedicated website.

LSC National Contracting Service

The National Contracting Service was set up to provide a one-stop shop for national and multi-site employers and their representatives in order to provide a single point of contact for LSC services especially contracting to:

- national employers with over 500 employees, who have a centralised personnel and payment system, but whose workforce is spread over more than one local LSC area
- providers who act on behalf of national employers;
- providers that have been established by employers and/or trades unions to provide a service to a specific industry sector;
- large multi-site public sector organisations (Armed Forces, NHS, Royal Mail, and Civil Service), where an umbrella organisation covers a number of independent units.

Welsh Assembly Government

The National Council for Education and Training for Wales and the Higher Education Funding Council for Wales are Assembly Sponsored Public Bodies, responsible for all post-16 education and training in Wales. Together these organisations are known as ELWa, Education and Learning Wales.

Small Business Service

The Small Business Service (SBS) provides a range of services to small to medium enterprises (SMEs) based in England. The definition of a SME is “individuals starting a business, sole traders, partnerships and limited companies or other businesses with up to 250 employees.”

Local LSCs contract with their SBS providers to ensure that SMEs can access the following range of services:

- information, advice and referral to a wide range of workforce development services and providers
- advice and support to help organisations progress to recognition against the Investors in People Standard
- advice and access to support on identifying training needs and skills development such as company training plans and key workers and management development.

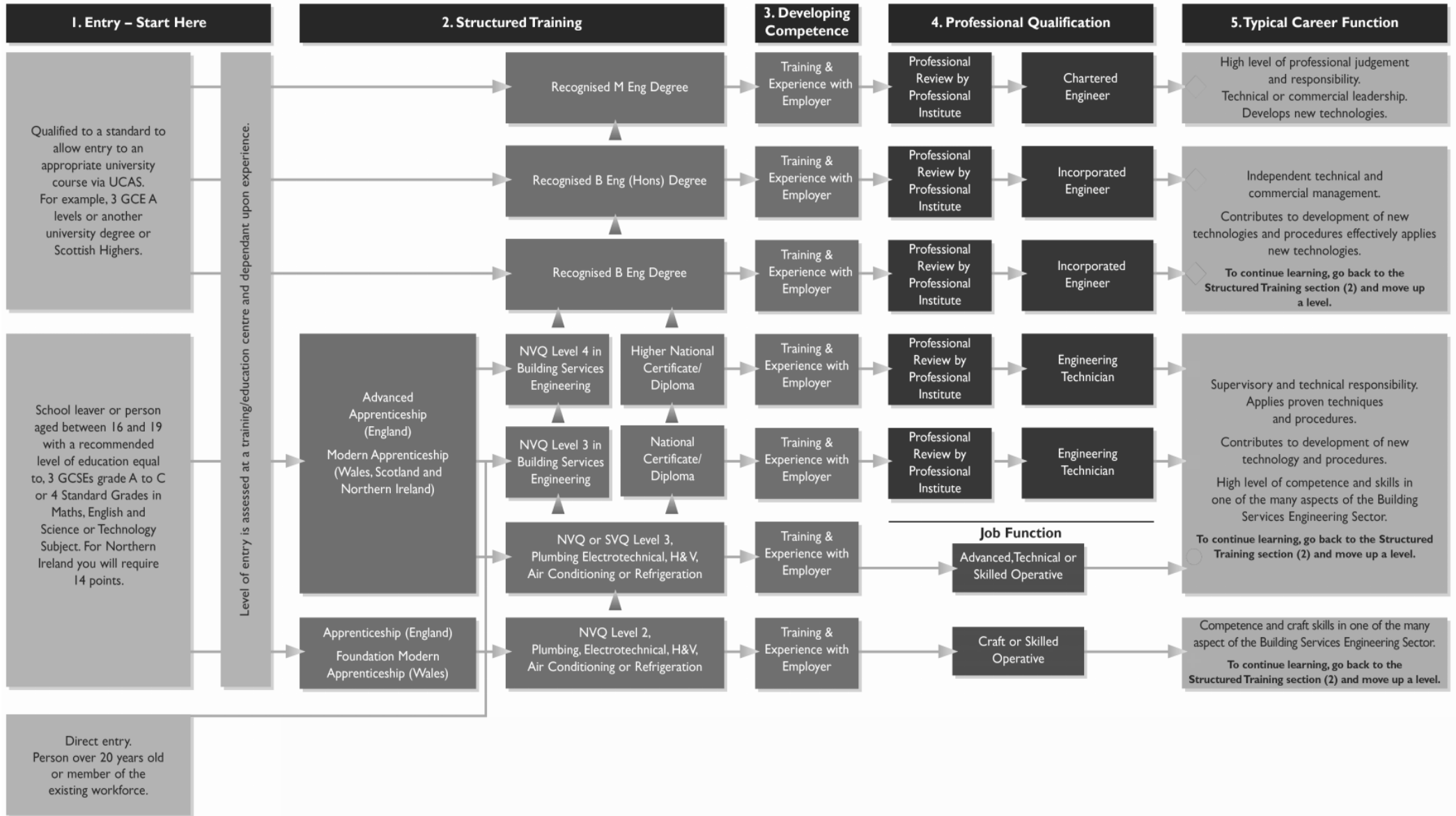
As part of their seamless service to SMEs, SBS providers should hold information and, where relevant, application packs, providing access to A/ FMAs.

ANNEX E: Progression Routes

The Sector Skills Council
for Building Services Engineering

Building Services Engineering Careers Map

Summit SKILLS



Annex F

Extract from SummitSkills Assessment Strategy

1.0 THE MAIN FEATURES OF THE ASSESSMENT STRATEGY FOR HEATING, VENTILATING, REFRIGERATION AND AIR CONDITIONING NVQs

1.1 Specifying sources of evidence

The assessment strategy requires that assessment documentation will identify:

- the performance evidence that must come from the candidate's workplace. i.e. the evidence that will naturally arise from the candidate's work activities. This evidence will be of competences that commonly occur in routine HVACR work
- the performance evidence that may come from an environment or situation that simulates conditions in the workplace – see note 1.2 below
- the performance evidence that must be produced from controlled/observed conditions in the Assessment Centre.

There are some critical aspects of competence which require candidates to follow set work sequences, or to carry out procedures that have a high cost or safety implication, (if they are not carried out correctly). These aspects of competence are intended to be carried out in controlled conditions in the Centre, under the supervision of the Centre Assessor.

The majority of candidates will be undertaking a course of training with an expectation that they will complete an NVQ/SVQ by the end of their course.

Because of the difficulty of prescribing the work activities that smaller companies undertake, it may be that a candidate does not have the opportunity to gather particular items of evidence from the workplace. In these circumstances, the Assessment Centre will be expected to assist the candidate to make alternative arrangements to gather those items of evidence (with the exception of those competences which must be produced from the workplace).

1.2 Workplace simulation

Some performance evidence will therefore be derived from assessments undertaken in an Assessment Centre.

For all such assessments, evidence must be derived from situations that realistically and authentically simulate workplace conditions, in accordance with the general criteria that form part of this strategy.

Specifying evidence that must be obtained from observed workplace simulation – the national occupational standards will specify the evidence that must be obtained from situations which realistically simulate workplace conditions.

1.3 Criteria for the simulation of workplace conditions

Simulated workplace conditions must be clearly designed to incorporate all those features and characteristics of the real life workplace conditions, that will permit an assurance that the evidence produced will provide a reliable and valid indication of competence in the workplace.

1.3.1 Physical conditions

- a) The size and scale of the area in which the system or component is being installed should be full size, matching the type of installation location that would be found on an authentic job or site.
- b) Any wall or floor construction or finishes should be in materials that are used for real life construction.

- c) Positioning of work should simulate real life work situations – if work at heights is a requirement of the evidence, then provision for work at heights should be made, if work under floors is an evidence requirement then authentic provision must be made.

1.3.2 **System components**

- a) **Any system components that candidates are required to install in simulated conditions should be of the types, sizes, and general condition of components that candidates would be required to install on the job.**

1.3.3 **Working arrangements**

- a) Working arrangements under which candidates are intended to produce evidence in simulated conditions should replicate arrangements within the workplace. The arrangements should generally permit each candidate to provide evidence for all competences for which the simulated facility is intended.
- b) Candidates working in simulated conditions should be provided with the job information that they would normally receive on the job – this may include verbal or written instructions, drawings or specifications appropriate to the type of installation activity.
- c) Candidates should not receive, either directly or indirectly, assistance from other candidates or guidance from the work of other candidates, which will reduce the value of the evidence as a reliable and valid measure of the candidate's competence.

Where real life job situations would normally require operatives to be given assistance, with for instance heavy or bulky components, then this should be permitted in work situations which simulate normal working conditions. However the role of persons acting as assistants in work simulated situations should be clearly defined by the Awarding Body and controlled by the Assessment Centre.

1.4 **Assessment of knowledge and understanding**

All knowledge and understanding will be assessed by Assessment Centres.

The awarding bodies have agreed and endorsed the strategy requirement for the assessment of underpinning knowledge and understanding through question papers set and provided by the awarding body, which will be marked by the Centre Assessor.

The awarding bodies will produce and provide Assessment Centres with assessment material in the form of question papers, which will cover the unit and range knowledge specification for each qualification. The content of the question banks including type and style of questions will be the subject of ongoing development, monitoring and review between the Standards Setting and Awarding Bodies.

The Candidate and the Assessor will agree when the Candidate is competent to undertake the assessment tests.

The awarding bodies will issue advice on pass marks, and re-sits.

Centre Assessors will mark question papers, and Centres will administer the question papers under conditions prescribed by the Awarding Body.

Internal and External Verifiers will sample test papers to minimum sampling levels determined by the Awarding Body.

1.5 **Assessment of job performance objectives**

The central source of evidence of performance will be the candidate's workplace. Every candidate will be expected to produce from the workplace, evidence of competence in all those workplace activities specified in the assessment documentation.

1.6 **The role of workplace evidence within the assessment strategy**

In order to comply with current PSAG requirements for assessment strategies, the assessment strategy for Heating, Ventilating, Refrigeration and Air Conditioning NVQs/SVQs provides for the collection and recording of evidence in the candidate's workplace. The main requirements of the strategy are:

1.6.1 **The workplace as a source of evidence**

The source of workplace evidence is the candidate's workplace, and the evidence will arise from the day-to-day work that the candidate undertakes as part of his/her employment.

The workplace evidence collection procedures will permit the candidate to record 'naturally occurring' evidence collected during day-to-day work activities in his/her HVACR occupation.

The procedures will not therefore require the candidate's employer to re-schedule work simply to provide evidence collection opportunities for the candidate (however, many employers will wish to take an active role in assisting the candidate to gain evidence, and may take the candidate's evidence requirements into account when allocating work).

1.6.2 **The sort of evidence that is appropriate to the workplace evidence collection and recording systems**

The units of competence also provide a specification of the underpinning knowledge and understanding that underpins the competence.

While workplace evidence may provide evidence of the candidate's knowledge, its main contribution to the candidate's evidence requirements will be in proving competence in job performance.

Procedures for collecting evidence from the workplace will focus on the critical performance evidence that employers have indicated may reasonably be expected to arise from routine work activities.